Technics

Turntable System

SL-5200
SL-5210

Operating instructions

English ..... 1—12
Deutsch ..... 13—25
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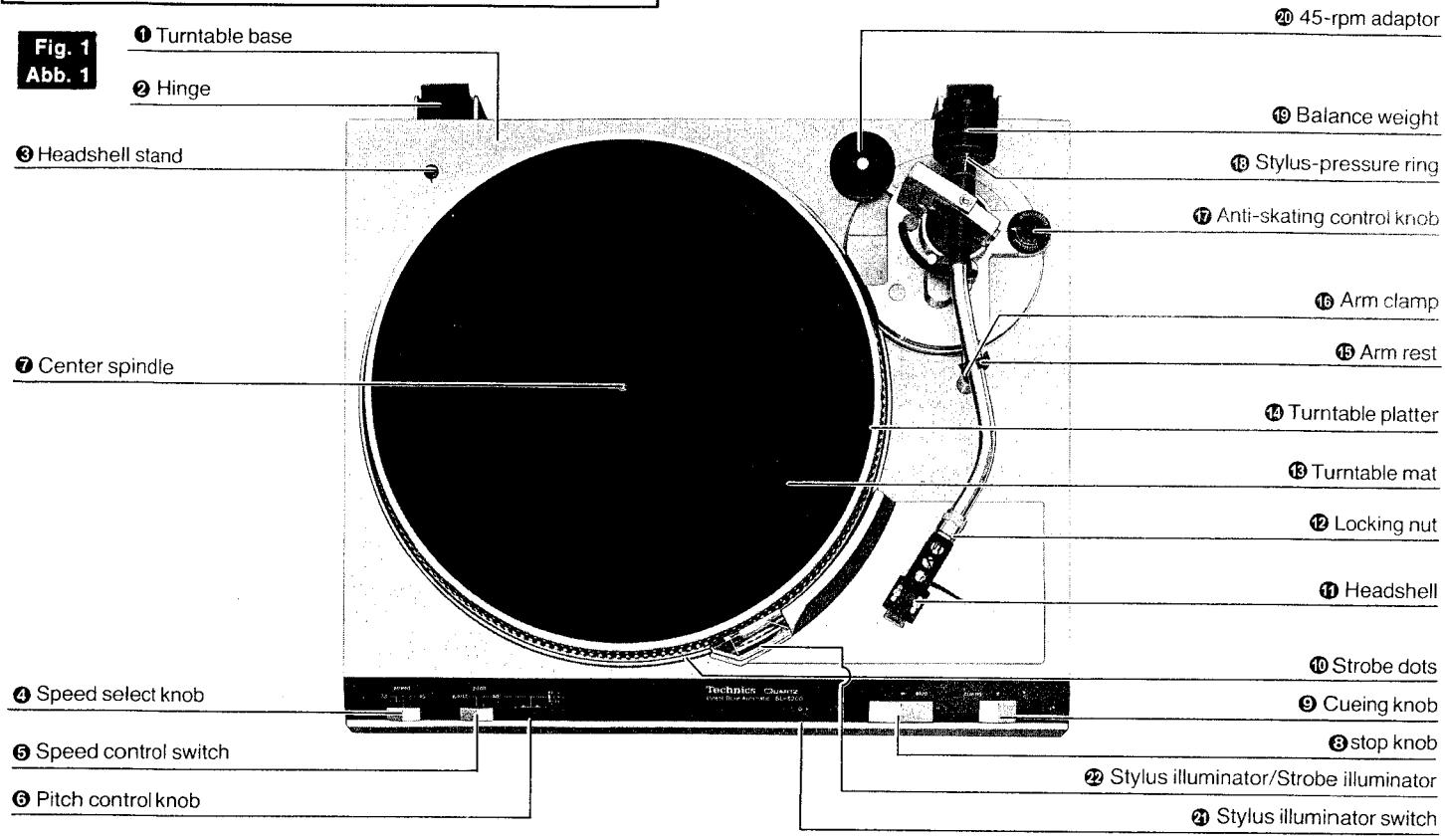
Svenska ..... 52—64

Before operating this set, please read these instructions complete

Parts identification

Fig. 1
Abb. 1



We want to thank you for selecting the SL-5200/SL-5210.
For optimum performance, we recommend that you read these instructions carefully.

These operating instructions cover both SL-5200 and SL-5210.

Before use

Caution:

Never connect the AC power plug before assembly has been completed. Attach the dust cover last, so that assembly and adjustments can be made most conveniently.

Note:

The operating instructions are commonly applicable to units with cartridge and without cartridge, and also to those of different colors.
For the units without cartridge, the cartridge section of the specifications may be neglected.

■ Checklist of parts

Turntable unit	1
Turntable platter	1
Turntable mat	1
Dust cover	1
45-rpm adaptor	1
Balance weight	1
Headshell	1
Overhang gauge (for the unit without cartridge)	1
Shell weight	1

Caution for safe use of this apparatus [FOR UK ONLY]

Caution
- This apparatus is double insulated, safety earth not required

Important
- **The wires in this mains lead are coloured in accordance with the following code:**

Blue:	**Neutral**
Brown:	**Live**

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows.
The wire which is coloured **BLUE** must be connected to the terminal which is marked with the letter **N** or coloured **BLACK.**
The wire which is coloured **BROWN** must be connected to the terminal which is marked with the letter **L** or coloured **RED.**
This equipment should be disconnected from the mains when not in use.

Fig. 2
Abb. 2

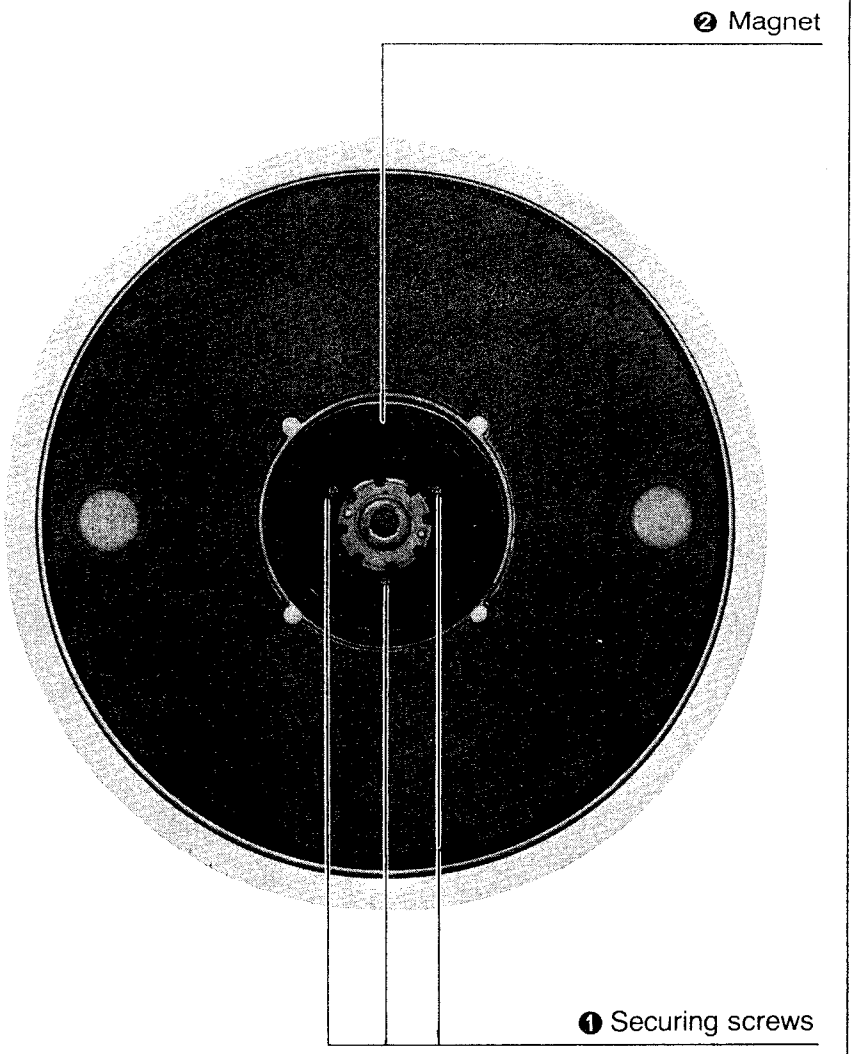


Fig. 6
Abb. 6

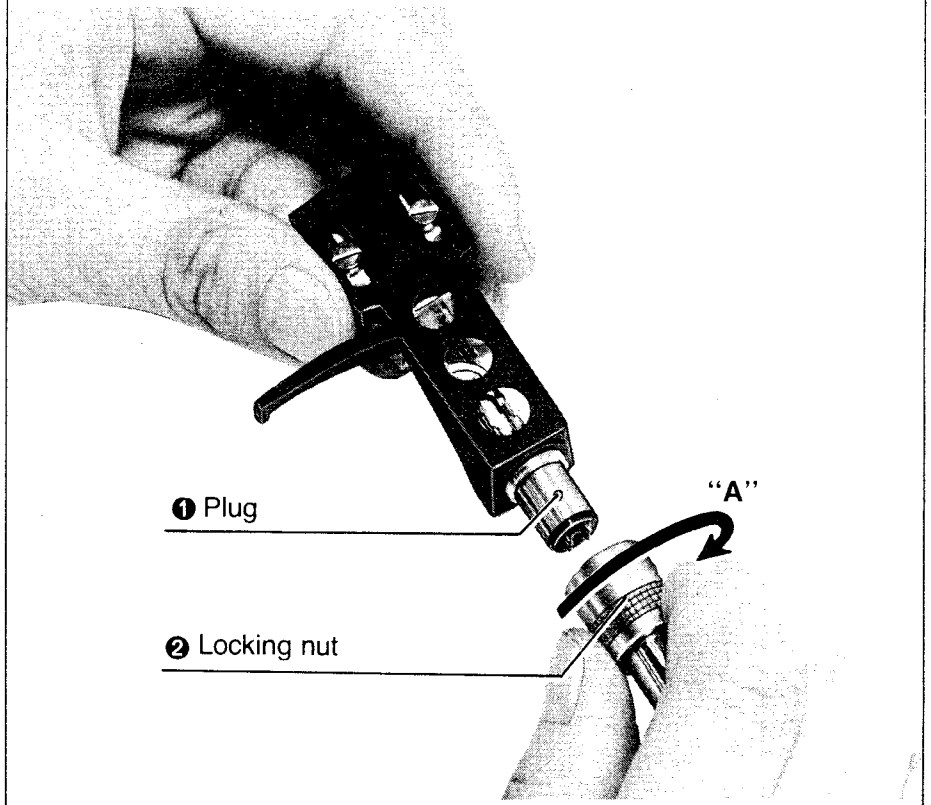


Fig. 2
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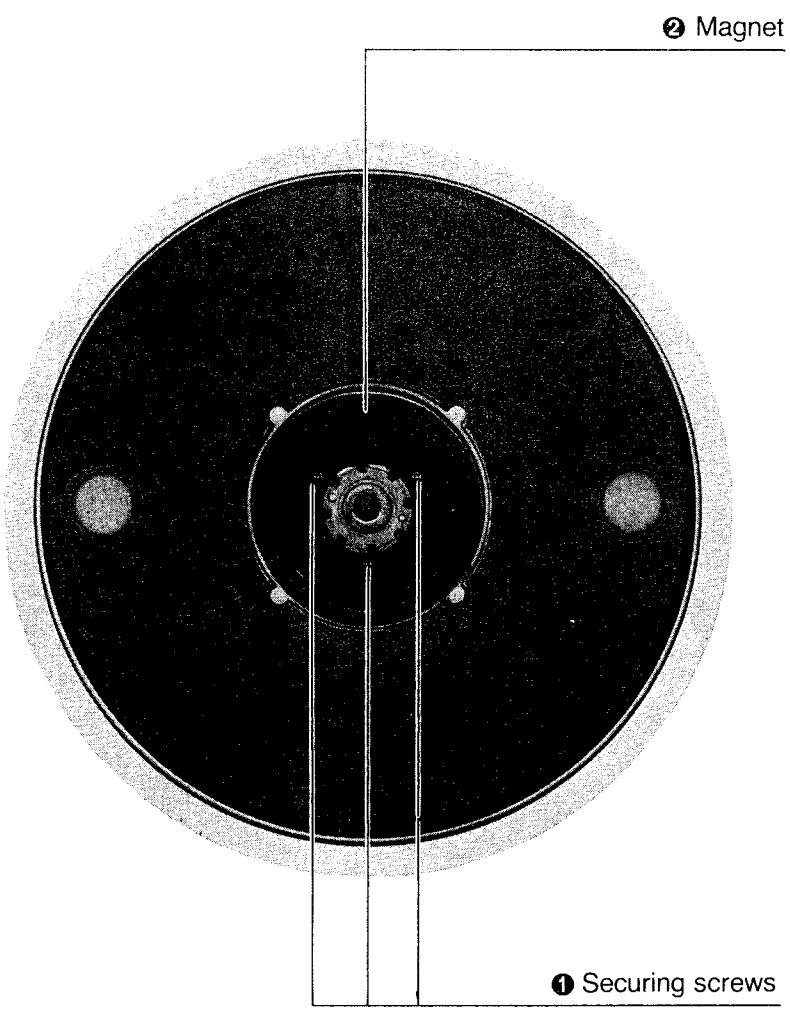

Fig. 6
Abb. 6

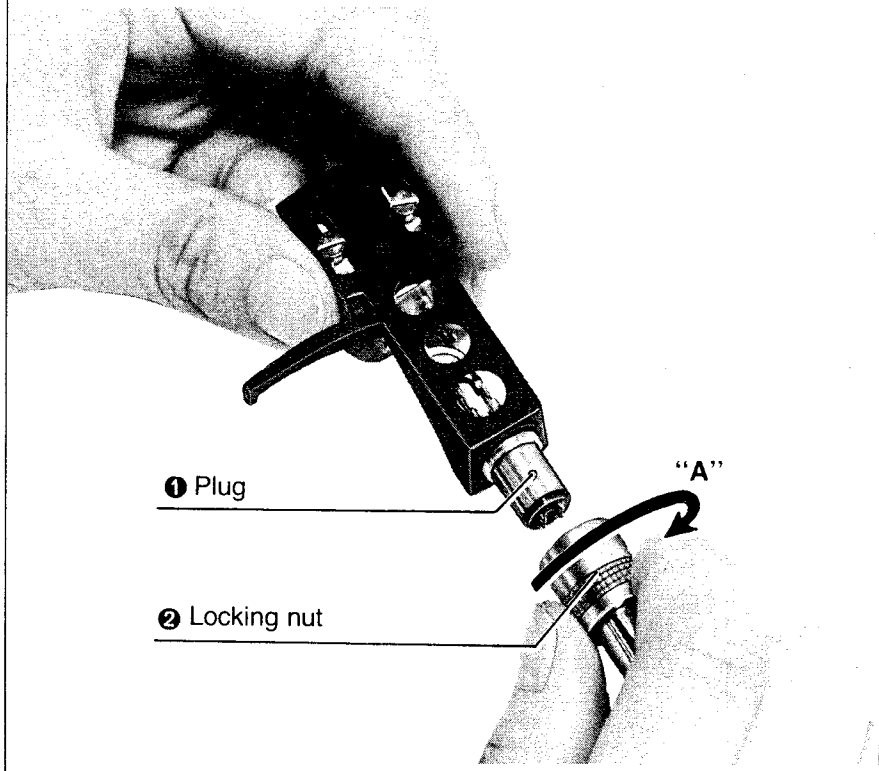

Fig. 27
Abb. 27

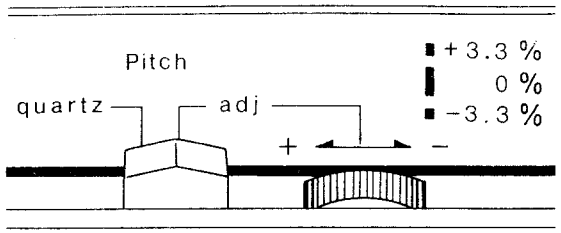

Fig. 28
Abb. 28

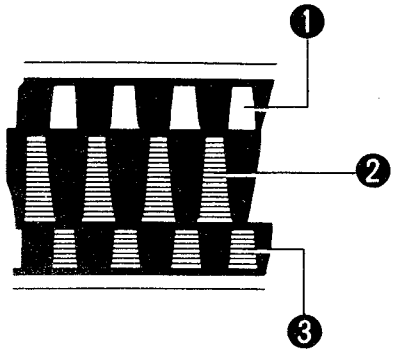

Fig. 29
Abb. 29

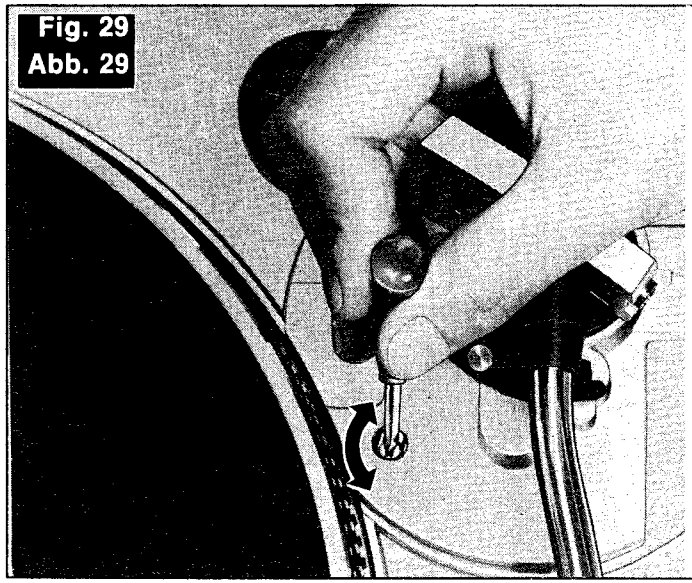

Fig. 24
Abb. 24

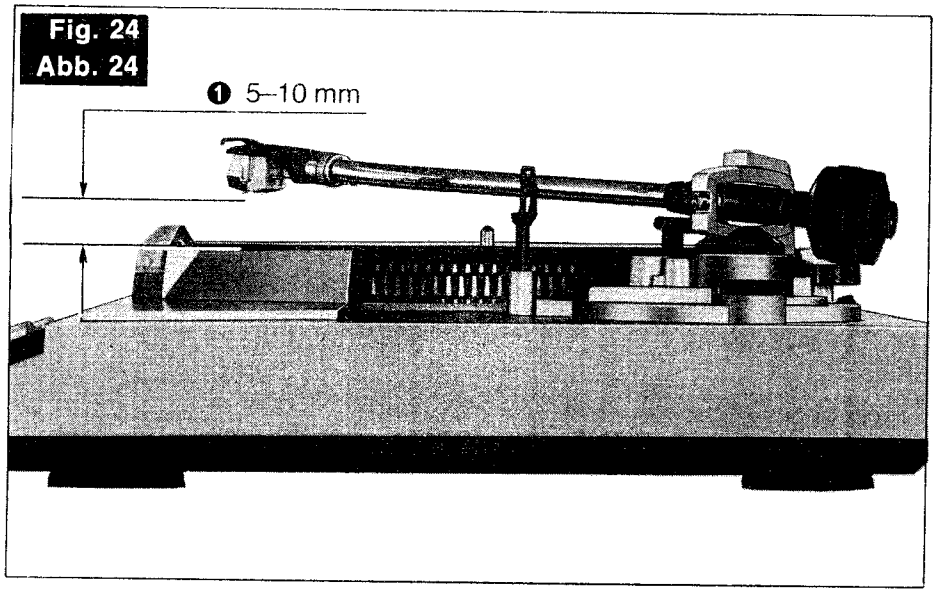

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Abb. 25

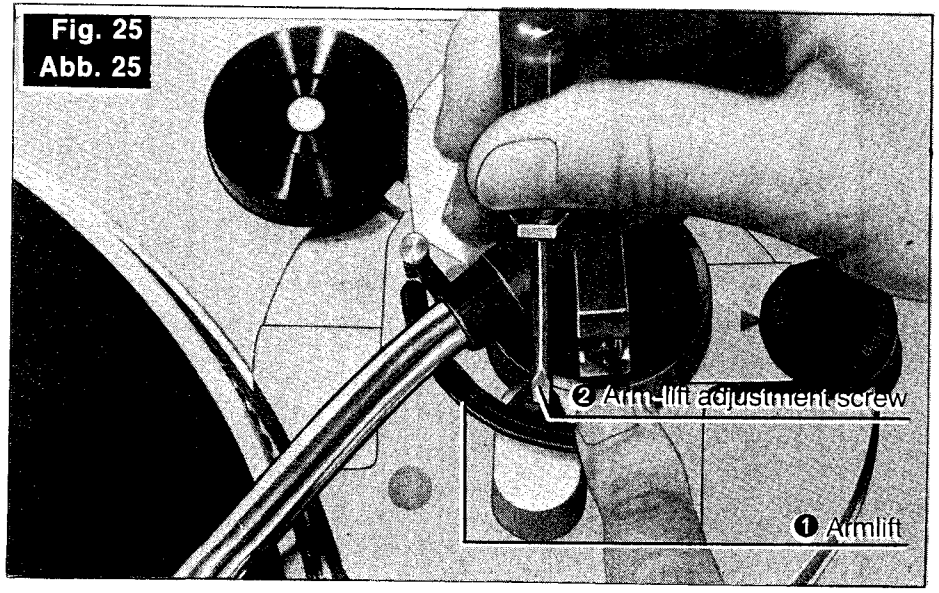
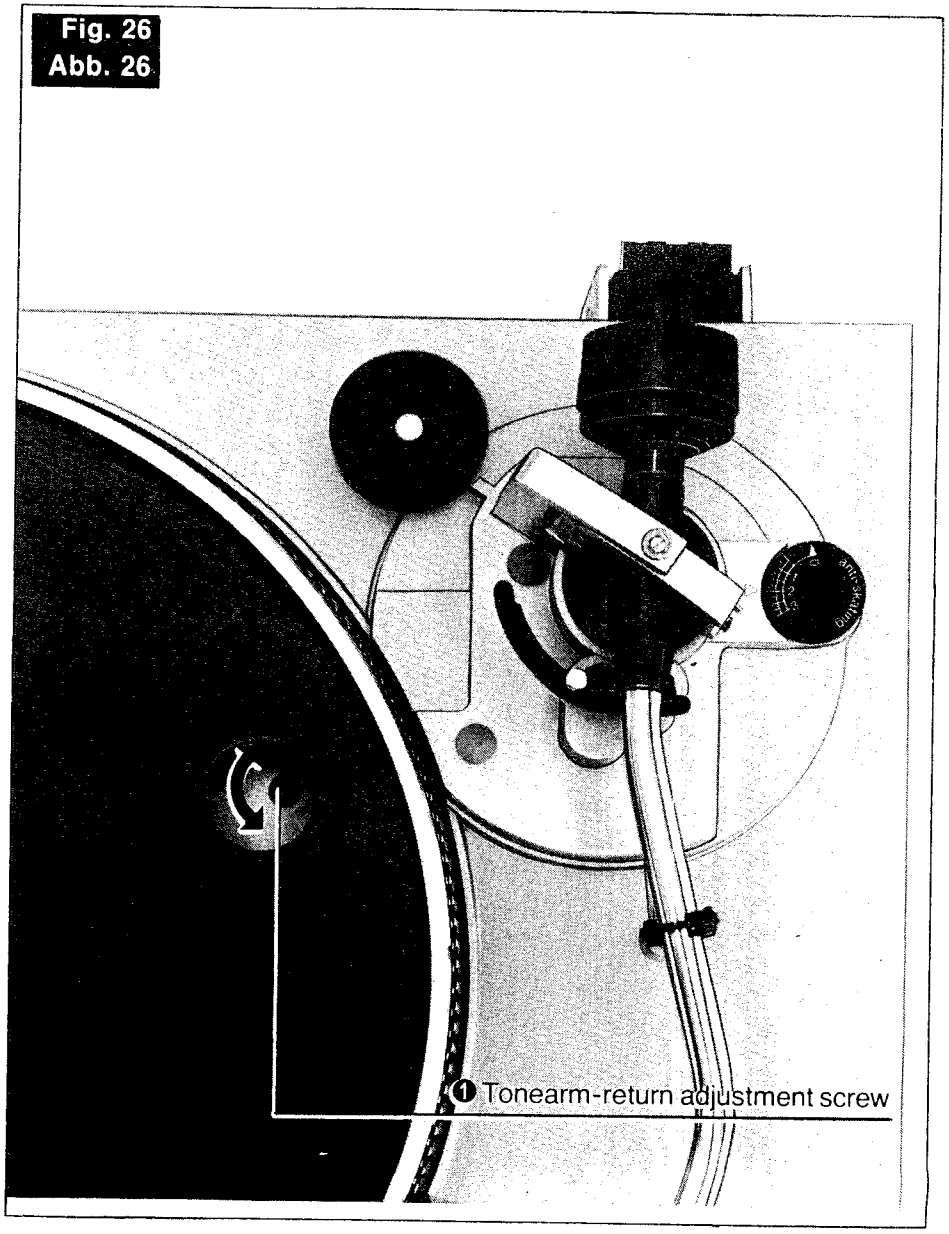


Fig. 26
Abb. 26



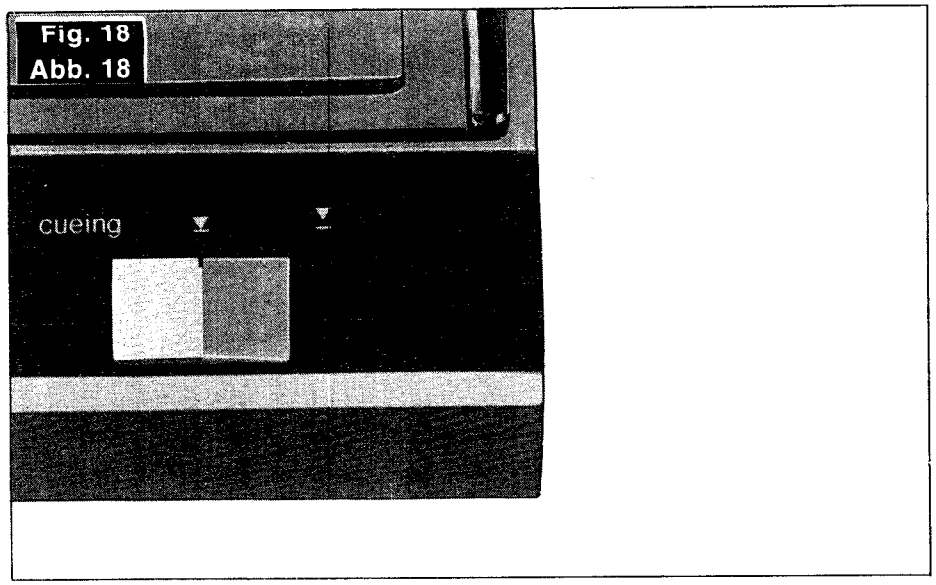


Fig. 18
Abb. 18
cueing

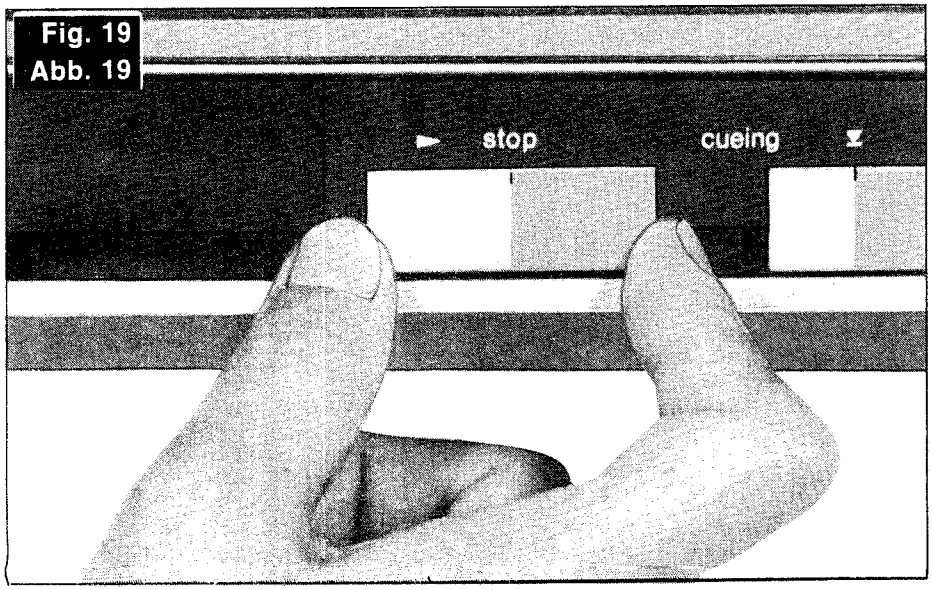


Fig. 19
Abb. 19
stop
cueing

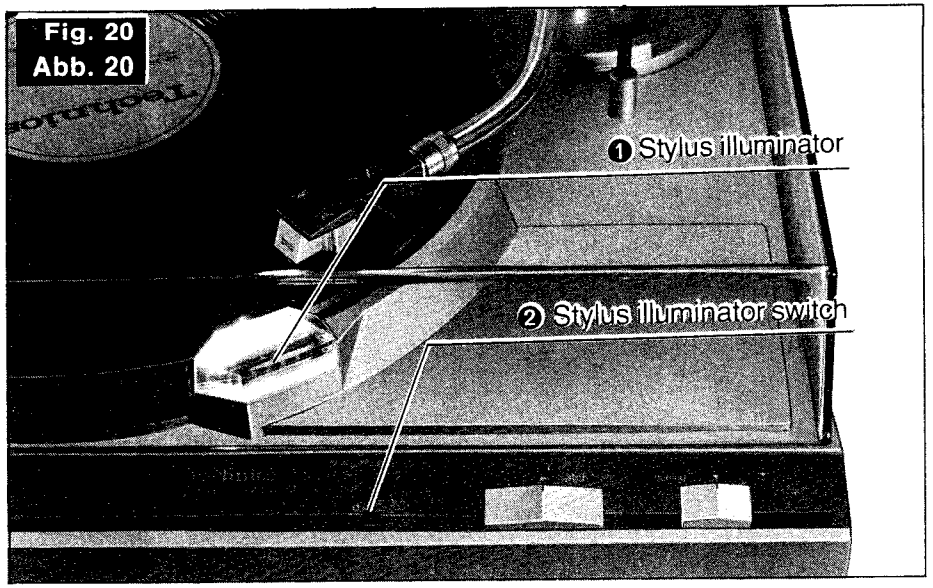


Fig. 20
Abb. 20
❶ Stylus illuminator
❷ Stylus illuminator switch

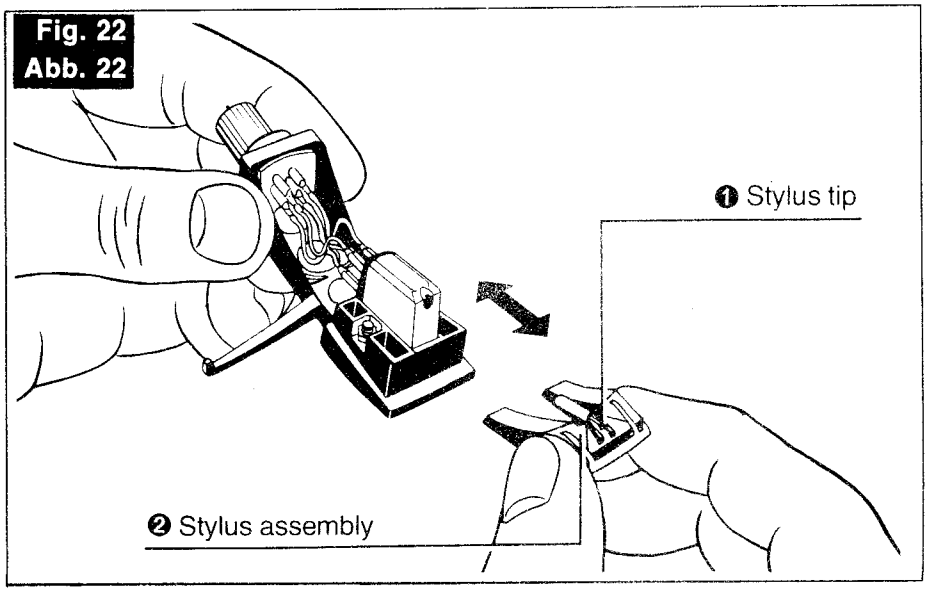
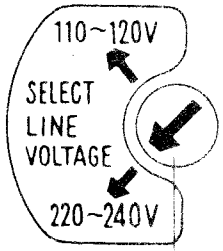


Fig. 22
Abb. 22
❶ Stylus tip
❷ Stylus assembly

Fig. 14
Abb. 14



❶ AC line-voltage selector

Fig. 15
Abb. 15

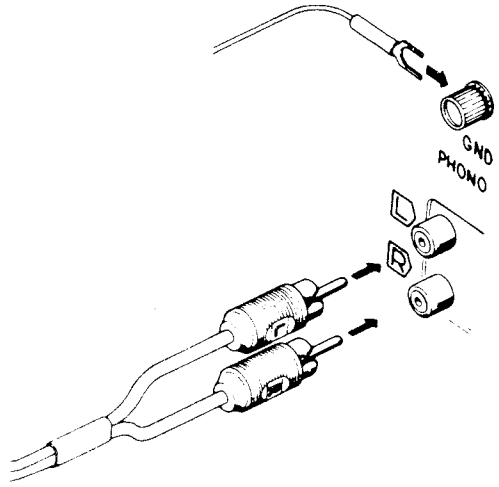


Fig. 16
Abb. 16

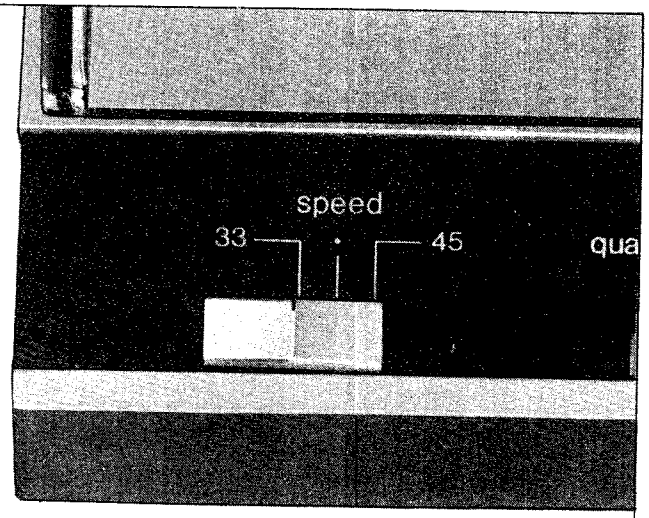
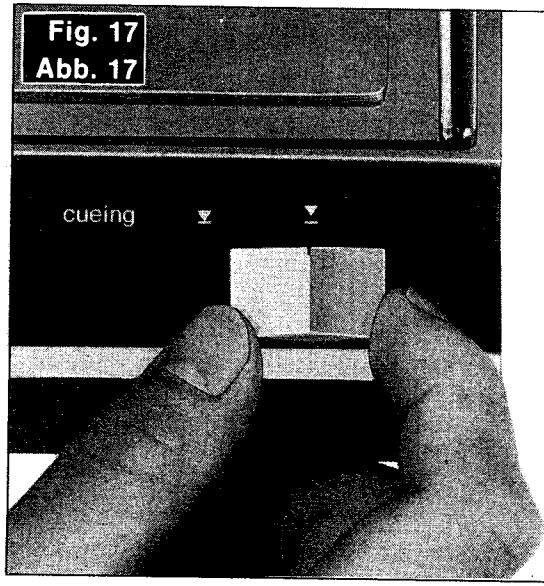


Fig. 17
Abb. 17



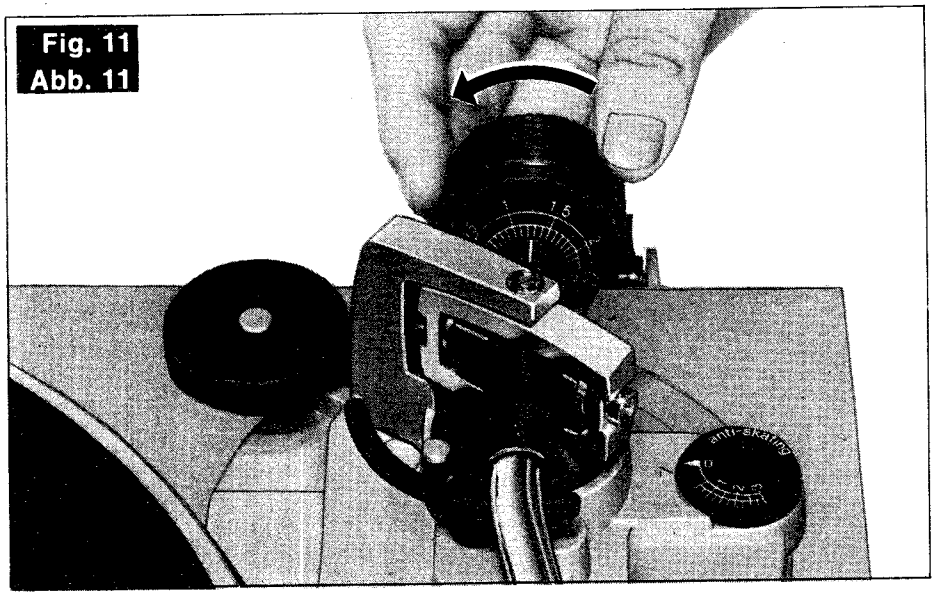


Fig. 11
Abb. 11
anti-skating

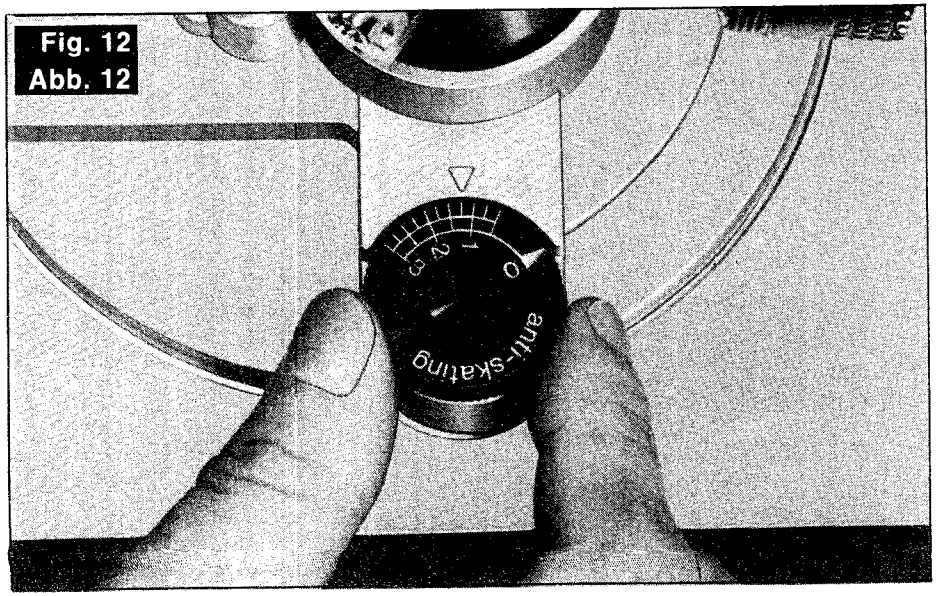


Fig. 12
Abb. 12
anti-skating

Fig. 13
Abb. 13

Fig. 9
Abb. 9

Horizontally balanced state

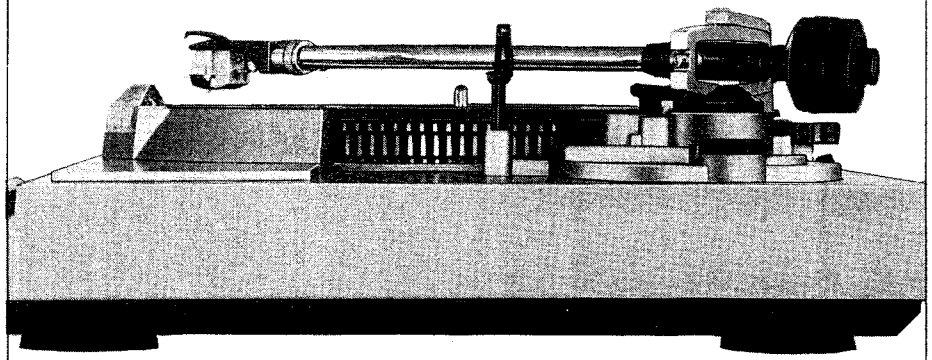


Fig. 10
Abb. 10

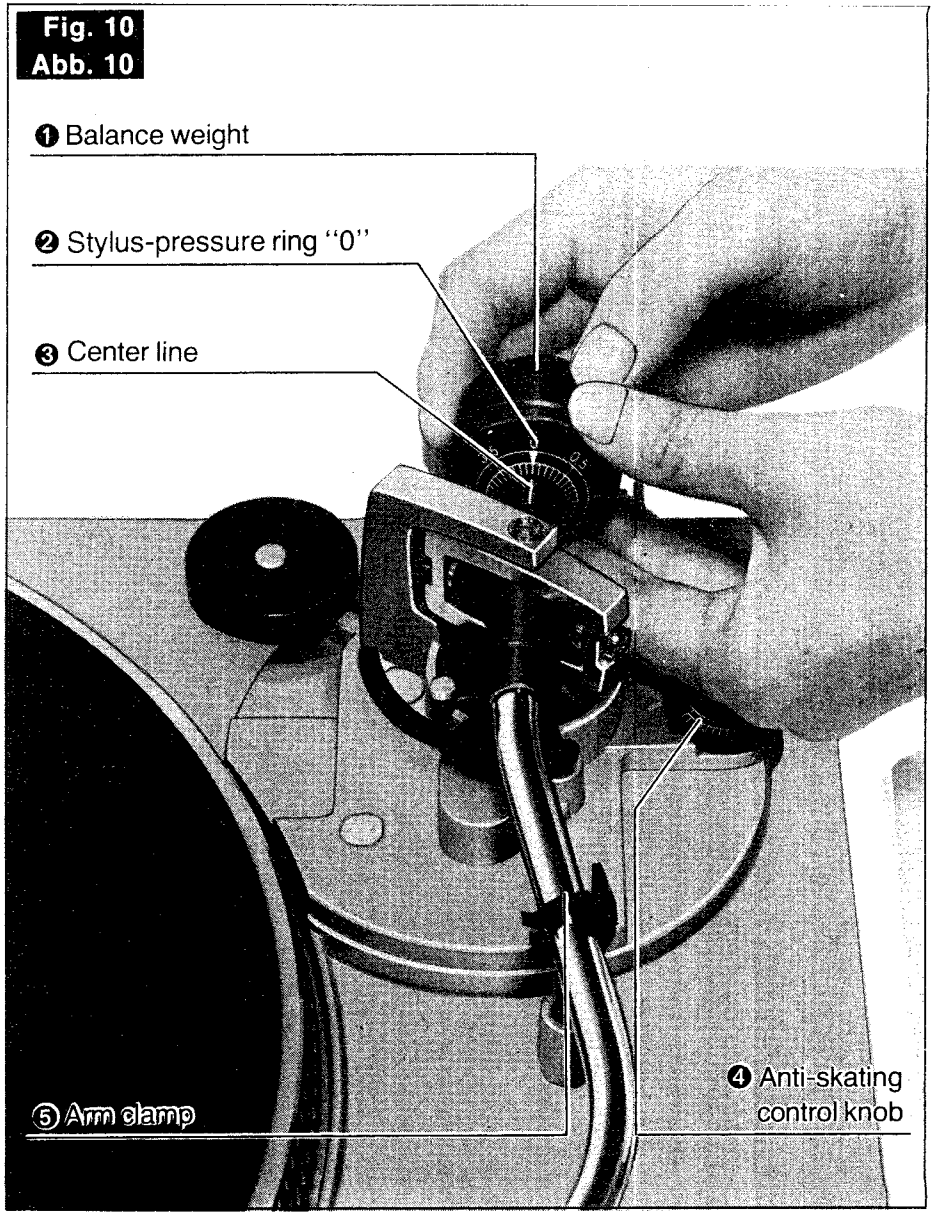


Fig. 7
Abb. 7

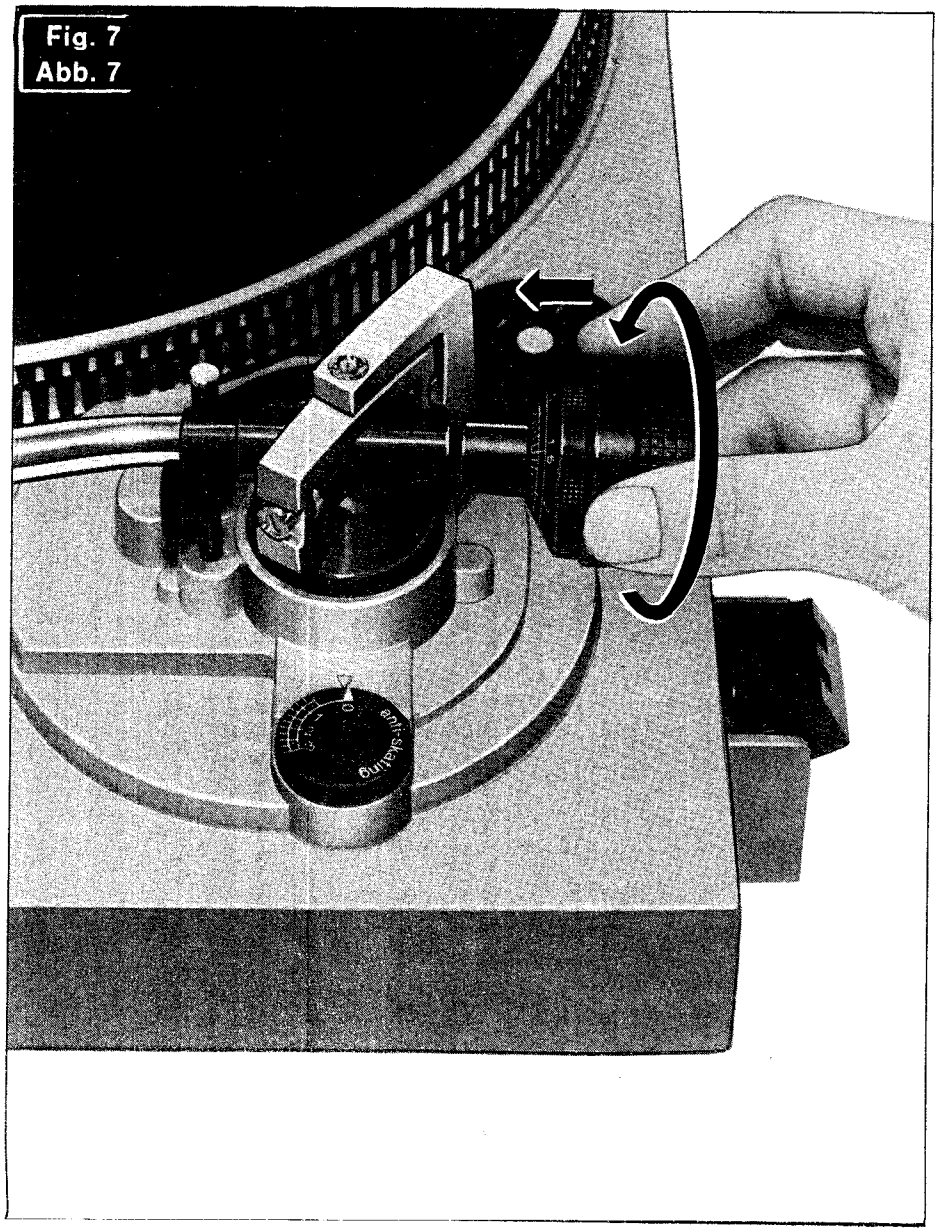


Fig. 8
Abb. 8

Fig. 2
Abb. 2

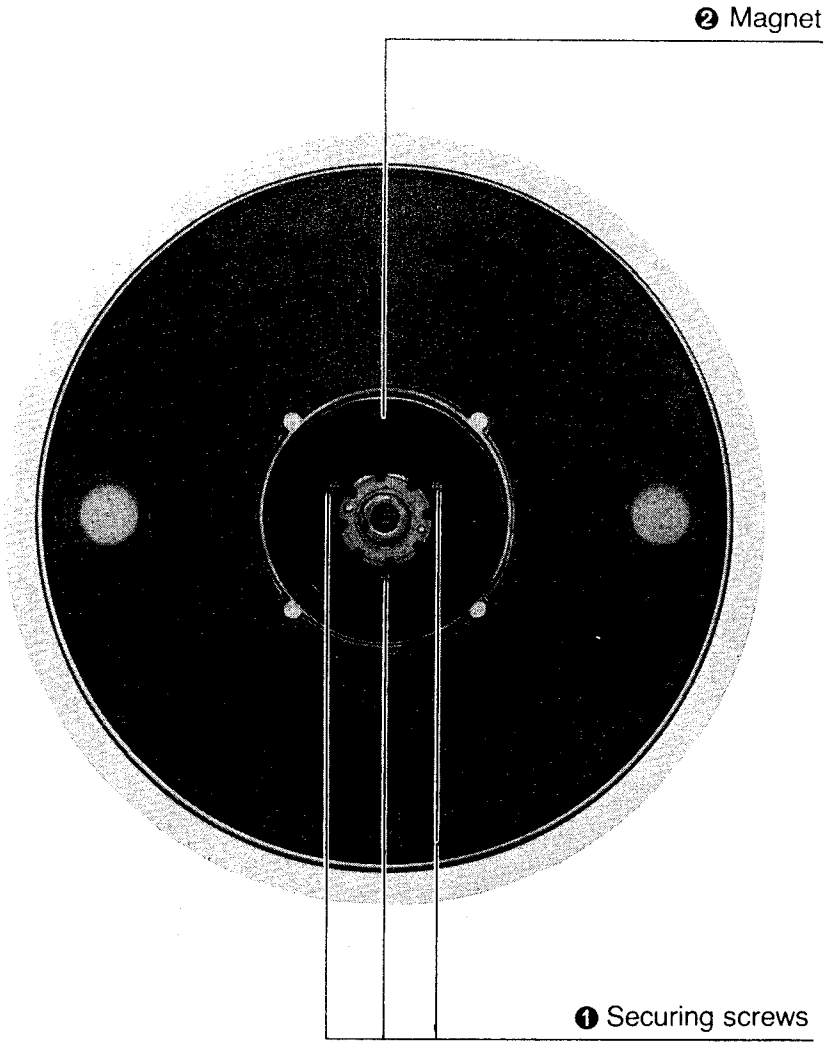
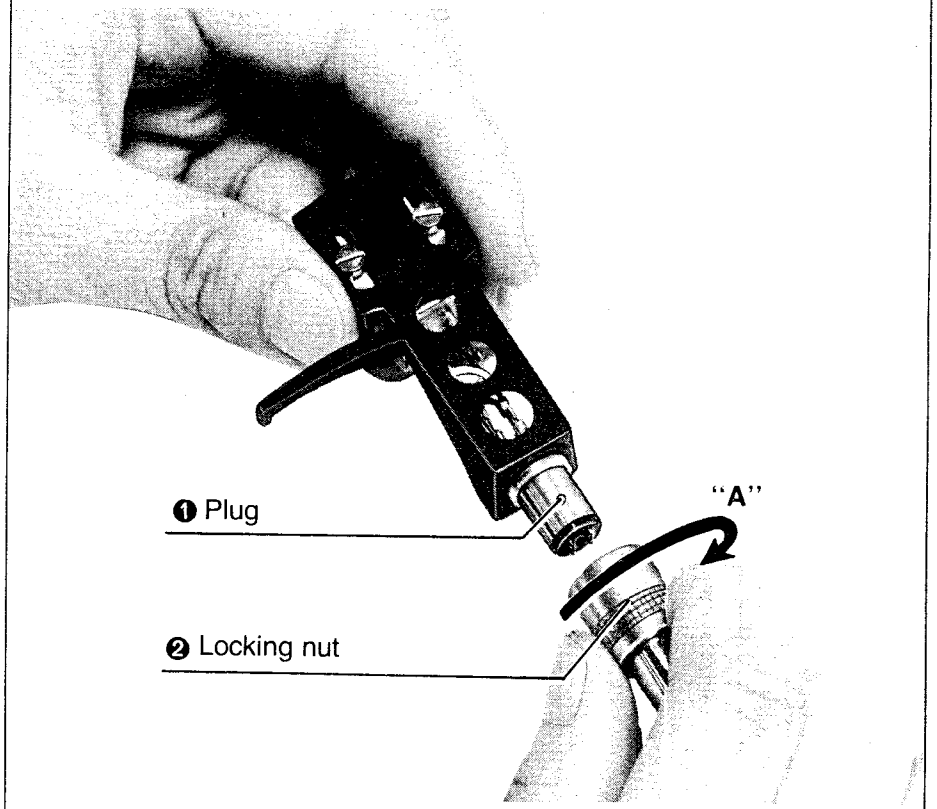


Fig. 6
Abb. 6



Assembly and set-up

■ Installation of turntable platter

1. Place the turntable platter on the center spindle.
   Note:
   The rotor is connected to the underside of the turntable platter. (The magnet of the motor is attached to the turntable platter.) To maintain optimum performance, extra care should be taken to prevent adhesion of dust or iron filings to the magnet and not to damage the magnet by dropping it.
   Do not remove or loosen the screws. Should the position of the fixed magnet be altered by loosening the securing screws, the rated performance of the unit cannot be guaranteed. **(See Fig. 2.)**
2. Place the turntable mat on the platter.

Note:
After having placed the turntable mat or the turntable platter, manually rotate the turntable platter clockwise about 10 times.
This will disengage the automatic mechanism from the tonearm gear, which, in rare cases, may have moved out of its normal position during transportation.

■ Installation of the cartridge (for set without cartridge)

When you install a cartridge, refer to the operation instructions of that cartridge.
During installation, attach the stylus protector to guard the stylus tip from damage.

1. Connect the lead wires to the cartridge terminals.
   The terminals of most cartridges are color coded. Connect each lead wire to the terminal of the same color.
   White (L+) ..... **Left channel+**
   Blue (L−) ..... **Left channel−**
   Red (R+) ..... **Right channel+**
   Green (R−) ..... **Right channel−**

2. Install a cartridge to the headshell, and tighten if with screws provided with the cartridge. **(See Fig. 3.)**

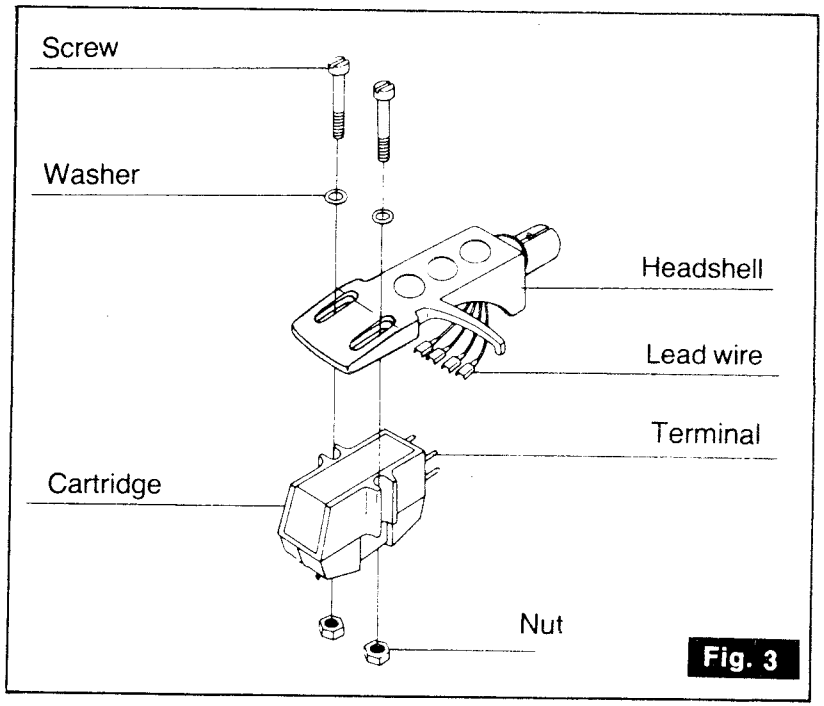


Fig. 3

Note:
Use the shell weight only for a light weight cartridge. **(See Fig. 4.)** (Less than 6.0 g.).

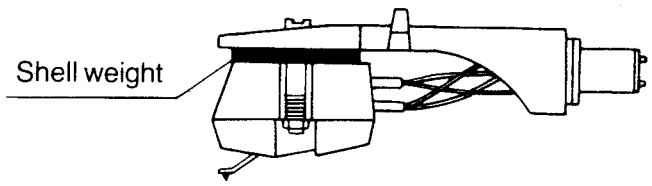


Fig. 4

■ Adjustment of overhang

For the unit with overhang gauge

1. Insert the headshell into the gauge. **(See Fig. 5-1.)**
2. Loosen the mounting screws and move the cartridge forward or backward until the stylus tip lines up with the edge of the gauge.
3. Tighten the mounting screws without moving the cartridge.

Note:

Your cartridge is now adjusted for lowest tracking error and minimum distortion.

This gauge is exclusively designed for this tonearm.

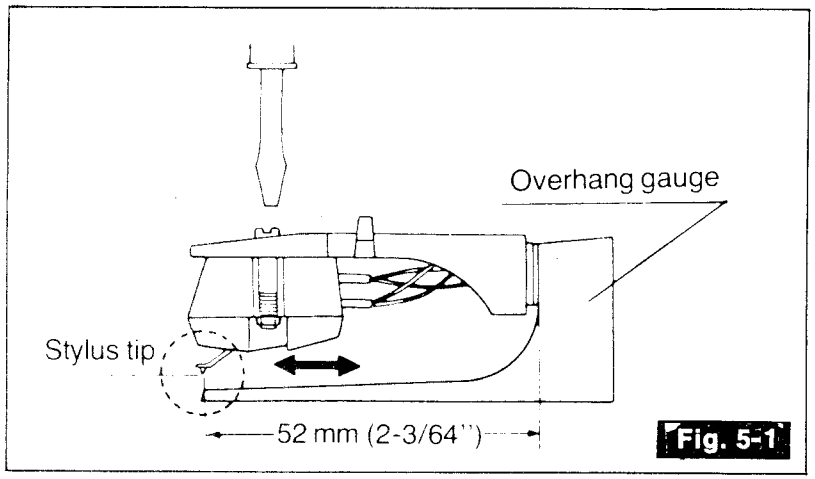


Fig. 5-1

For the unit without overhang gauge (See Fig. 5-2.)

The overhang of this unit is 15 mm.
Loosen the mounting screws and move the cartridge forward or backward until the distance between the stylus tip and the plug becomes 52 mm (2-3/64") as shown in the picture.
Tighten the mounting screws without moving the cartridge.

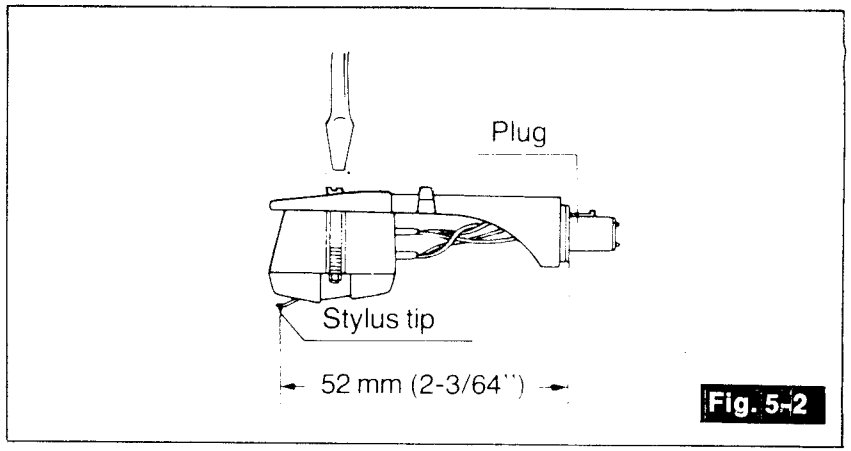


Fig. 5-2

■ Installation of headshell (See Fig. 6.)

Insert the headshell into the front end of the tubular arm, and turn the locking nut clockwise (in the direction shown by the arrow "**A**"), with the headshell firmly held horizontally.

■ Installation of balance weight (See Fig. 7.)

Place the balance weight on the rear shaft of the tonearm.

■ Adjustments of horizontal zero (0) balance and stylus pressure

1. Before adjusting horizontal zero **(0)** balance, check the following:
   Make sure that the speed select knob is in the "●" (neutral) position.
   Make sure that the cueing knob is in the "▼" position.
   Make sure that the anti-skating control knob is at "**0**" position.
2. Remove the stylus protector, if your cartridge has a detachable one.
   Be careful not to touch your fingers to the stylus tip.

3. Release the arm clamp and lift the tonearm from the arm rest to free it.
   Turn the entire balance weight clockwise (indicated by the arrow **"A"**) or counterclockwise (indicated by the arrow **"B"**) until the tonearm is approximately balanced horizontally (floats freely).
   (See Figs. 8 and 9.)
   Note:
   During the adjustment of the horizontal zero **(0)** balance, be careful that the stylus tip of the cartridge does not contact the turntable mat or turntable base.
4. After the tonearm is horizontally zero **(0)** balanced, temporarily refasten the tonearm with the arm clamp. **(See Fig. 10.)**
5. Hold the balance weight stationary with one hand as shown in the picture, and rotate only the stylus-pressure ring to bring the numeral **"0"** of the ring into alignment with the center line on the tonearm rear shaft. **(See Fig. 10.)**
   The adjustment of the horizontal zero **(0)** balance is now completed.
6. After adjusting the horizontal zero **(0)** balance, turn the balance weight clockwise in the direction of the arrow and align to the correct stylus pressure. **(See Fig. 11.)**
   (Follow the cartridge manufacturer's recommendation.)
   As the stylus-pressure ring moves in step with the balance weight, proper stylus pressure can be selected by directly reading the graduated ring.
   Note:
   Set the stylus pressure to the maximum recommended value for your cartridge in cases where the record has an extremely high recording level, or where the unit is operated in a room at low temperature, or in places in which the unit is subjected to vibrations.

■ Adjustment of anti-skating control

Set the anti-skating control knob to the same value as the stylus pressure. **(See Fig. 12.)**

Note:

When a cartridge with integral dust brush is used, follow the cartridge manufacturer's recommendation for adjusting both stylus pressure and anti-skating force.

■ Installation of dust cover (See Fig. 13.)

Place the dust cover into position from directly above, holding it at both sides. For detaching the dust cover, be certain first to raise it as illustrated before removal.

Note:

Opening or closing of the dust cover during play should be avoided. This may not only cause undesired vibrations, but also result in skipping of the stylus.

If you must open the dust cover during play, do so as gently as possible.

Placement

- **Place the unit in a stable and horizontal position, where there is little or no vibration.**
- **Locate the unit as far away from the speakers as possible and isolate the unit from sound radiation from them.**
- **Do not place the unit where it is exposed to direct sun, dust, moisture or heat.**
- **Keep it in a well ventilated place.**

Connections

■ Connect the AC power plug

Connect the AC power plug to an AC wall socket.

Caution:

Make sure that the turntable's AC line-voltage selector is matched to your local voltage before connecting the AC power plug.

Never connect to a DC socket.

If the pre-selected voltage is different from your local voltage, turn the Ac line-voltage selector with a screwdriver so that it corresponds to your local voltage.**(See Fig. 14.)**

The AC line-voltage selector is located under the turntable platter.

■ Connect the output terminals **(See Fig. 15.)**

Output terminals		**Amplifier or Receiver**
L (White)	——→	**L** Channel
R (Red)	——→	**R** Channel
GND (Spade lug)	——→	**GND**

Note:

Be sure to connect the ground terminal firmly to the amplifier or receiver. If this connection is not made or is loose, a power source **"HUM"** will result.

How to operate

1. Place a record on the turntable mat.
2. Set the speed select knob to the desired record speed. **(See Fig. 16.)**
3. Remove the stylus protector, if your cartridge has a detachable one.
4. Release the arm clamp.
5. Set the cueing knob to the "▼" position. **(See Fig. 17.)**
6. Move the tonearm over the record and set the cueing knob to the "▼" position. **(See Fig. 18.)**

   The tonearm will descend slowly onto the record and play will begin.

   When the tonearm is moved toward the record, the power is turned on and the turntable platter will start rotating.
7. When play is finished, the tonearm will automatically return to the arm rest (auto-return), and the turntable platter will stop rotation.

   The turntable platter will continue to rotate briefly due to its own inertia.

   If the unit is not to be used for some time, set the speed select knob to the neutral "●" position.

   Attach the stylus protector again, if you have one, to guard the stylus tip from damage.

■ When you play a 45-rpm record with a large center hole

Place the 45-rpm adaptor on the center spindle.

Set the speed select knob the **"45"** position.

■ How to suspend play

Set the cueing knob to the "▼" position.
The stylus tip of the cartridge will be lifted from the record.

■ How to stop play

Set the stop knob to the **"stop"** position. **(See Fig. 19.)**
The tonearm automatically returns to the arm rest, and the turntable stops rotating.

■ If the unit is not to be used for some time

Secure the tonearm with the arm clamp.
Attach the stylus protector, if your cartridge has one, to guard the stylus from damage.
Close the dust cover.

■ About on/off of the stylus illuminator (See Fig. 20.)

The unit is equipped with a stylus illuminator for lighting the stylus tip during play as well as a strobe illuminator **(LED)**.
When the switch for the stylus illuminator is set to the "●" position, the stylus illuminator and strobe illuminator are lit upon rotation of the turntable.
If the stylus illuminator is not required, turn the stylus illuminator switch to the "○" position.
Then, the lamp for stylus tip illumination goes out and only the LED for the strobe illuminator is lit.

Notes and maintenance

- **Use utmost care when handling the platter and when placing it on the motor shaft to prevent possible damage to the magnet.**
- **Do not turn "on" the power supply, with the turntable platter detached.**
- **During rotation of the turntable platter, never try to depress it with a hand or to hold it stationary for a long period of time.**
- **Do not grasp or hold the tonearm d' 'ng operation of the automatic mechanism.**
- **When using other headshells, make sure that the headshell configuration is compatible.**
  When other types of headshells are employed, the handle portion of the headshell may strike against the inner upper surface of the dust cover during automatic motion of the tonearm. In such a case, we recommend that the dust cover be left open during play.
  (See Fig. 21.)

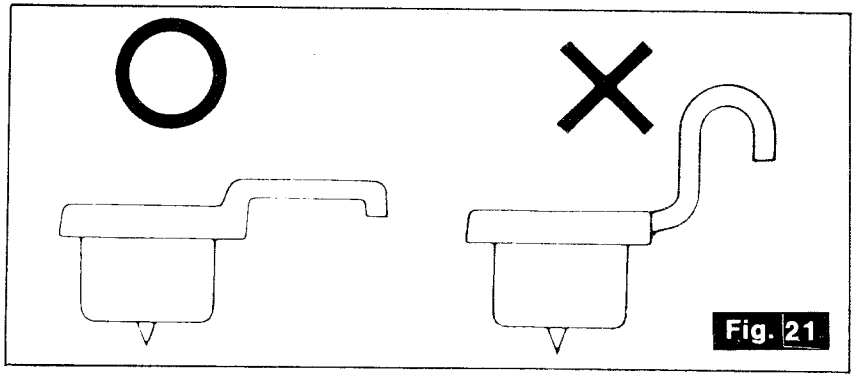


Fig. 21

■ **Before detaching or attaching the headshell, be sure to turn the power of the amplifier or receiver off.**
Detaching or attaching of the headshell with the volume control turned up may cause damage to the speakers.

■ **Dust and dirt should be carefully removed from stylus tip or records.**
Dust and dirt on the stylus tip or record may not only result in deterioration of tone quality, but also cause undue wear of the record and the stylus tip itself.
Special stylus tip brushes and record cleaners can be purchased in most electronic supply houses.

■ **Wipe the headshell terminals from time to time.**
Dust and dirt at the headshell terminals may result in increased **"HUM"** noise or intermittent sound. Use soft dry cloth to clean the headshell terminals.

■ **Wipe the dust cover and turntable base with a soft, dry cloth.**
Never use any cleaners containing alcohol, benzine or thinner.
Use of a chemical dust cloth should also be avoided. Be sure that the dust cover is not exposed to insecticide spray.
To remove stubborn finger prints or grease spots, detach the dust cover and disconnect the AC power plug.
Use a soft cloth slightly moistened with a mild soap and water solution.
Do not wipe the dust cover during play, or the tonearm may be attracted toward the dust cover due to the generation of static electricity.

■ Replacement of stylus (For set with cartridge)

The unit is furnished with a diamond stylus.
The life of the stylus differs depending on the conditions of use, but it is recommended that you replace the stylus at the first sign of wear. About 500 hours of use is an approximate standard.
The replacement stylus for the unit is the EPS-206ED.

1. Remove the headshell/cartridge from the tubular arm.
   Hold the stylus assembly with your fingers and withdraw it slantwise, as shown in the picture. **(See Fig. 22.)**
2. Align the new stylus assembly with the square opening of the cartridge main body, and push it into the opening positively as far as it will go.

■ **Lubrication**
Apply 2 or 3 drops of oil once after every 2000 hours of operation.
The time interval is much longer than that for conventional type motors (200—500 hours).
Please purchase original oil. **(Part number is SFWO 010.)**
(See Fig. 23.)

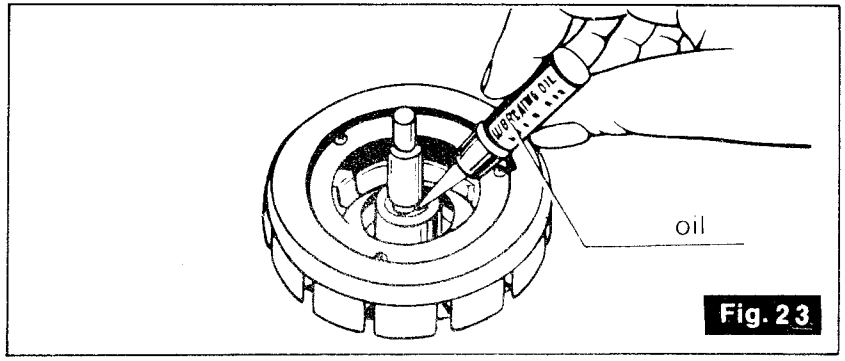


Fig. 23

Adjustments

■ Adjustment of arm-lift height

The arm-lift height (distance between the stylus tip and record surface when cueing knob is at the "▼" position) has been adjusted at the factory before shipment to approximately 5 to 10 mm. **(See Fig. 24.)**
For using different cartridges available on the market or when further adjustments are particularly necessary, make adjustment as follows:

1. Set the speed select knob to the "●" position to prevent rotation of the turntable platter.
2. Move the tonearm toward the center spindle.
   Attach the stylus protector, if available, to guard the stylus tip from damage.
3. Turn the adjustment screw clockwise or counterclockwise, while pushing the arm lift down. **(See Fig. 25.)**
   Clockwise rotation
   —distance between the record and stylus tip is reduced.
   Counterclockwise rotation
   —distance between the record and stylus tip is increased.
   Note:
   As the adjusting screw has a hexagonal head, be sure to make the adjustment while depressing the arm lift, or the screw will not move freely.
   Also be sure that the hexagonal head retracts correctly into the arm lift when the latter is released.

■ Adjustment for automatic return position (See Fig. 26.)

(Remove the turntable mat.)
In cases where the tonearm tends to return before the playing has finished.
—rotate clockwise.
In cases where the tonearm fails to return after the last groove of the record has been played,
—rotate counterclockwise.

■ Fine speed adjustment

The strobe dots on the outer periphery of the turntable enable you to make a fine speed adjustment of +3.3% or −3.3%. **(See Fig. 27.)**

1. Set the speed control switch to the position **"adj."**.
2. While turning the pitch control knob to the "+" side (or the "−" side), adjust to the degree at which the strobe dots on the upper stage (or lower stage) look as if they were stationary to obtain a pitch of +3.3% (or −3.3%).
3. Upon setting the speed control switch to the position **"quartz"**, regular revolutions are available.

(See Fig. 28.)

❶ When the strobe dots at the upper stage appear stationary, the revolution is set at +3.3%. **(See Fig. 28.)**
❷ At the quartz position, regular revolutions are available.
❸ When the strobe dot at the lower stage appear stationary, the revolution is set at −3.3%.

■ Muting adjustment (See Fig. 29.)

This unit employs a muting mechanism for eliminating the unpleasant noise produced when the stylus tip descends to or leaves the record.
In cases where adjustments for the muting time are required, for example, after the arm lift height adjustment, etc., follow the procedures as given below.
If the signal of a record is not heard immediately after descent of the stylus tip onto the record,—**turn the screw clockwise.**
If any unpleasant noise is heard upon descent of the stylus tip onto the record,—**turn the screw counterclockwise.**

Specifications

General

Power supply:	~110–120/220–240V, 50 or 60 Hz
Power consumption:	12 W
Dimensions:	43.0×13.0×37.5 cm
(W×H×D)	(16-59/64×5-7/64×14-49/64 inches)
Weight:	6.9 kg (15.2 lb)

Turntable section

Type:	Direct Drive Automatic Turntable System (Auto-return, Auto-stop)
Drive method:	Direct drive
Motor:	Brushless DC motor
Turntable platter:	Aluminum die-cast, 30.4 cm (12")
Turntable speeds:	33-1/3 and 45 rpm
Pitch controls:	Individual adjustment controls, ±6% adjustment range
Starting torque:	1 kg·cm (0.87 lb·in)
Build-up characteristics:	90° or 1/4 rotation to 33-1/3
Speed fluctuation due to load torque:	0% within 0.9 kg·cm (0.78 lb·in)
(with quartz control)	(even at a stylus pressure of 180 g)
Speed drift:	Within ±0.002%
(with quartz control)	
Wow and flutter:	0.025% WRMS (JIS C5521) ±0.035% peak (IEC 98A Weighted)
Rumble:	−56 dB (IEC 98A Unweighted) −78 dB (IEC 98A Weighted)

Tonearm section

Type:	Universal tubular arm, static-balanced type
Effective length:	230 mm (9-1/16")
Overhang:	15 mm (19-32")
Friction:	Within 7 mg (horizontally and vertically)
Effective mass:	12 g (without cartridge)
Tracking error angle:	Within 2°32′ (at the outer groove of 30 cm (12") record) Within 0°32′ (at the inner groove of 30 cm (12") record)
Offset angle:	22°
Adjustable stylus pressure range:	0 to 2.5 g (stylus pressure direct reading type)
Cartridge weight range:	6 to 9.5 g 13.5 to 17 g (including headshell)
(with shellweight):	3 to 6.5 g 10.5 to 14 g (including headshell)
Headshell weight:	7.5 g

Cartridge section (for set with cartridge)

Type:	Moving magnet
Frequency response:	20 Hz to 25 kHz
Output voltage:	3.5 mV at 1 kHz 5 cm/sec. zero to peak lateral velocity (10 mV at 1 kHz, 10 cm/sec. zero to peak 45° velocity [DIN 45500])
Channel separation:	25 dB at 1 kHz
Channel balance:	Within 2 dB at 1 kHz
Compliance (dynamic);	12×10^{-6}cm/dyne at 100 Hz
Stylus pressure:	1.25 ±0.25 g (12.5 ±2.5 mN)
Load impedance:	47 kΩ to 100 kΩ
Weight:	6.0 (cartridge only)
Replacement stylus:	EPS-206ED

Specifications subject to change without notice.

Features

■ High performance electronic circuit and full-cycle detection FG for quartz phase-locked control of integral structure superior in rotational characteristics

Based on an electronic circuit composed of 3 kinds of highly integrated ICs developed for the SL-1300MK2 series and the full-cycle (360°) detection FG, the quartz phase locked control system with a crystal oscillator as its standard oscillator has been ado ted. For utilization of high accuracy crystal oscillation, the detection range is effected through 360° by means of the full-cycle detection FG of the motor stator for detection of revolutions, with a consequent extremely stable rotational accuracy.

Due to the employment of the integral structure, high torque DD motor, the starting time is practically instantaneous at 0.7 second 1/4 revolution). Moreover, through the quartz phase locked control system employed, speed deviation is 0 up to a stylus pressure of 180 g, while a pitch control of ±6% is possible.

■ Double-TNRC vibration-damping construction

The newly developed acoustic material* TNRC, which is high in vibration damping and superior in attenuation characteristics has been employed in the cabinet, while the base has another thick and heavy TNRC base which has been adopted for the SL-1300MK2 series.

Double TNRC construction is designed based on Technics non-resonance concept.

*TNRC—**T**echnics **N**on-**R**esonance **C**ompound

■ Low-mass, gimbal-suspension tonearm on arm friction of 7 mg and a muting circuit incorporated

The gimbal-suspension tonearm unique to Technics has descended

from the tonearms for the SL-1300MK2 series and is extremely sensitive with an arm friction of 7 mg (horizontal and vertical) and is of a low mass design having an effective mass of only 12 g. For using a high compliance cartridge, the low range resonance frequency is set in the vicinity of 10 Hz. Furthermore, since a muting mechanism is adopted for eliminating noises during the descent or ascent stylus tip to and from the record.

■ All Front-Panel Controls

The advancement to complete front-panel control marks a big step forward in turntable operation, not only because of the greater convenience, but also because of the greater protection from dust, as the dust cover can stay closed.

■ Tonearm Cueing Controlled from Front Panel

The tonearm is raised and lowered softly by a viscous-damped cueing lifter. Even with the dust cover closed, a cueing can be easily performed as the control is located on the front panel.

■ Automatic Tonearm Return

For greater operational convenience, the tonearm returns to the arm rest automatically.

■ Equipped with a stylus illuminator (stylus tip lighting) at facilitates selection of music even in a dark place

■ 3 row strobe dots capable of fine adjustments of +3.3% and −3.3%

■ Light, Aluminum Diecast Headshell

For longer and safer use of this unit

In order to receive the best service from this unit, and for the safest operation, carefully read the following information.

■ Power source

It is very dangerous to use this unit at a voltage which is different from the rated voltage.

There is danger of combustion if the unit is connected to a power source which is different from the rated voltage.
Be very careful concerning this point.

Direct current cannot be used.

There are some places, such as ships, where direct current is used as the power source. Before connecting the unit, confirm the power source.

■ Connection of power cord

Wet hands are dangerous.

Be sure to never touch the power cord with wet hands because there is danger of electric shock. This is true, of course, of all electric equipment.

Do not pull the power cord.

Never pull the power cord to disconnect it. Always pull the plug only.

■ Location of unit

Choose a place which is not in direct sunlight.
Select a place which will assure good ventilation.

■ **Never place heating equipment nearby.**
Be sure to keep stoves and other sources of heat away from this unit, because heat radiated by such equipment may cause deformation of plastic parts or damage the cabinet, or, at worst, cause a fire.

■ **Especially for familles with children**
Take care that no small items, such as metal objects, are put inside this unit.
In addition, children should be especially warned not to put anything into the ventilation holes, such as toys or a screwdriver, because these things may cause an electric shock or result in a malfunction of the unit.

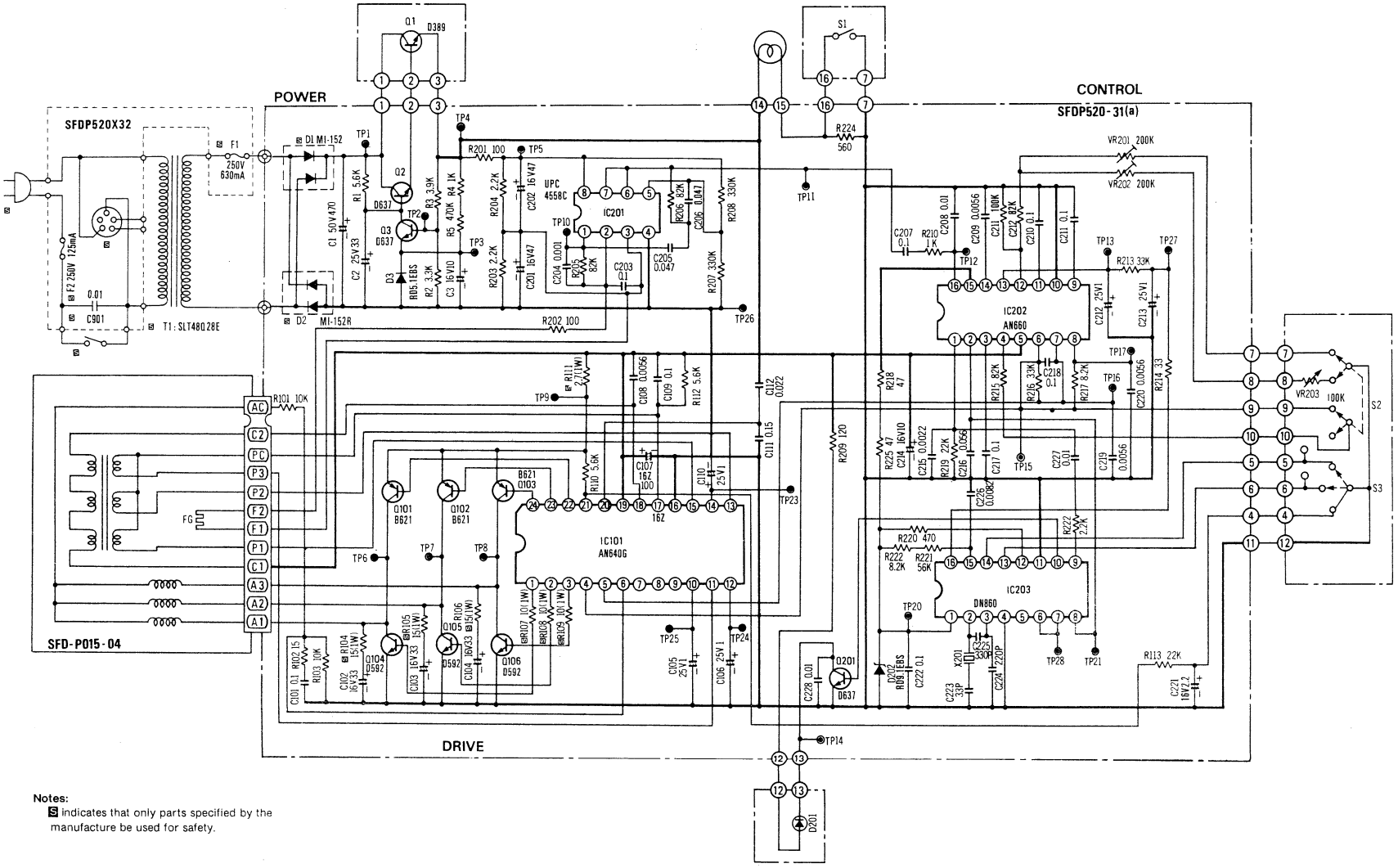
■ **If water spills on the unit**
If water should happen to spill on the unit, from an overturned vase for example, there is danger of fire or electric shick. Disconnect the power plug from the electric outelt immediately, and contact the store from which the unit was purchased.

■ **Reconstruction can cause accidents**
Absolutely never try to remodel, reconstruct or repair this unit yourself. Do not attempt to touch any internal parts because to do so may result in an electric shock or other accident.

■ **Be sure the power is off.**
After you have finished using this unit, check once more to be sure that the power is off. If the unit is left with the power on for a long period of time, it may not only be damaged, thus shortening its useful life, but may also lead to a dangerous accident.

Schematic diagram

This schematic diagram may be modified at any time with the development of new technology.



Notes:
S indicates that only parts specified by the manufacture be used for safety.

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